genus is sharply defined from other members of the family of Geckoids, and the resemblance between the single American and Australian species is very great indeed.

11. *Peripia torresiana*, sp. n.

Back uniform granular, without any tubercles. Scales in the middle of the belly in about 40 longitudinal series. Tail strongly depressed, but with rounded sides, finely granular, and with large subcaudals beneath. Number of the upper and lower labials varying from seven to nine. Front lower labial short, much broader than long, with a pair of elongate chin-shields behind. Light grey above, with some indistinct round white spots. Tail with brownish rings.

	millim.
Distance of the snout from the eye	7
„ „ ear	15
„ „ shoulder	24
„ „ vent	70
Length of tail	75
„ fore leg	20
„ hind leg	26

12. *Gymnodactylus Arnouxii*, Dum.
13. *Chlamydosaurus Kingii*, Gray.

XLI.—*Notes on Stony Corals in the Collection of the British Museum.* By Dr. F. Brüggemann.

In these notes I intend to publish a series of preliminary notices of some of the more remarkable novelties which I determined during my examination of the large collection of corals in the British Museum, as well as other remarks, especially on synonymy and geographical distribution of forms previously known. They will be of a miscellaneous character, and are not intended to be given in a strictly systematic order.

My thanks are due to Dr. Günther, keeper of the Zoological Department, for kind assistance, by which my studies have been greatly facilitated.

I. Description of two new Species of Turbinariidæ.

1. *Turbinaria bifrons.*

Corallum consisting of thin, vertical, variously plicate plates, which are covered equally on both sides with calicles. Coral-

lites arranged rather quincuncially (the oblique series being most pronounced), distant by about the length of their diameter, small, excessively short cylindrical (so as to appear nearly immersed), slightly oblique, the opening directed towards the edge of the leaf, the proximal part of the wall a little more projecting. Cells open, very shallow. Septa crowded, equal, generally 18–20 in number, narrow, with straight inner edge, the lateral surfaces delicately spinulous. Columella oviform, rather compact. Cœnenchyma moderately dense, longitudinally striate and delicately echinulate on the surface. Thickness of corallum, on the average, 3–4 millims.; diam. of calicles 2 millims., their height $\frac{1}{2}$ millim.

Hab. Unrecorded. B.M.

This species is distinguished at the first glance by being everywhere bifacial. In the other species there may be found occasionally one or two calicles budding on the outer surface of the corallum, or stout branches rising from the centre; in some of them, especially *T. frondens* and *T. peltata*, there occurs also a peculiar mode of plication, giving to the folded parts the aspect of bifaciality. But in the latter instance there is always a distinct suture on the ridges, separating two well-marked rows of calicles, while nothing of this kind is indicated in the present species. The corallites are in their general aspect much like those of *T. crater*, but less crowded, smaller and more oblique.

The single specimen seems to be only one half of the whole corallum, which apparently formed a hemispherical cluster of upright plates terminating at equal heights and obtusely rounded at their summits. The plates scarcely coalesce where they meet; below they are united to a somewhat spreading basal expansion. The height of the corallum is five inches; the greatest diameter, nearly eight inches.

2. *Astræopora expansa.*

Corallum attached by a short pedicel, expanded, flat crateriform; under surface covered to the very edge with a well-developed concentrically striate epitheca. Calicles irregularly scattered, generally placed at great distances from each other, small, rather deep, immersed, or with the margin only slightly projecting. Septa unequal, 12 in number, quite rudimentary in the upper half of the cell. Cœnenchyma abundant, deposited in nearly continuous thin horizontal layers, which are united by straight perpendicular trabeculæ, so that a vertical section shows a regular network, the square interspaces of which are $\frac{1}{2}$ millim. in diameter. Surface spongious and echinulate, rather scantily covered with very

thin, short, upright spines. Diameter of cells 1 to 1½ millim., their depth about 6 to 10 millims.

Hab. Unrecorded. B. M.

In the only specimen the outline figure of the upper surface is kidney-shaped, the corallum being deeply emarginate where it had been fixed to the ground. The greatest diameter is nearly 8 inches, the height 4 to 5 inches, the greatest thickness 1 inch.

This species differs from all its congeners in its mode of growth, in the ample development of the epitheca, and in the structure of the cœnenchyma. The echinulation of the surface is more delicate, and the cells are smaller and more distant, than in either of the other species (perhaps with the exception of *A. palifera*, which I have not seen).

The genus *Astræopora* now comprises five species, three of which were already known to Lamarck; the fourth was described and figured by Dana as *A. pulvinaria* (U.S. Expl. Exped., Zooph. p. 415, pl. 29. fig. 3), and afterwards enumerated as *A. profunda* by Verrill (in Dana, 'Corals and Cor. Isl.,' Appendix).

Astrea stellulata of Lamarck (Hist. Anim. s. Vert. ii. p. 261) and *Gemmipora fungiformis* of Michelin (Mag. Zool. 1840, Zooph. pl. 2) do not belong to this genus. The first is not determinable; and even if it should prove to be a distinct species, it ought to be renamed, because Lamarck meant to describe the totally different *Madrepora stellulata* of Ellis and Solander. *Gemmipora fungiformis* is one of the earliest stages of *Turbinaria peltata*; the only difference which might be pointed out from the description and figure is the extreme porosity of the cœnenchyma. But this condition is evidently due to the mode of preparation, and is frequently found in a similar degree in specimens of this and the other species of *Turbinaria*.

II. Remarks on the Species of Seriatopora.

1. *Seriatopora lineata.* B.M.

Millepora lineata, Linnæus, 1758 and 1767.
Madrepora seriata, Pallas, 1766; Ellis & Solander, pl. 31. figs. 1, 2.
Seriatopora subulata, Lamarck, 1816; M. Edwards.

The *Millepora lineata* of Linnæus is evidently the same as the *Seriatopora subulata* of Milne-Edwards (but neither of Ehrenberg nor of Dana). Linnæus's description answers exceedingly well to this species, and is even much more to the point than Lamarck's unsatisfactory diagnosis. Pallas may have included several species under his *Madrepora seriata*;

but nearly all his statements apply best to the above, a recognizable figure of which was given by Ellis and Solander.

To the description in M.-Edwards's monograph might be added that the species is easily distinguished by its straight, rather thick branches. The septa are comparatively well developed, and generally six in number, those of the second cycle being rudimentary or wanting. Columella represented by a very slight longitudinal elevation.

Hab. Indian Ocean (*Lamarck*).

I do not know where to place the *Seriatopora lineata* of Milne-Edwards, which is decidedly not the *Millepora lineata* of Linnæus. Esper's *Millepora lineata*, again (and perhaps also Dana's *Seriatopora lineata*), is different; his figure seems to represent a rather abnormal branch of *S. spinosa*, taken from the circumference of the corallum. Dana, and after him Milne-Edwards, quote as a synonym of their *S. lineata* a "*Seriatopora subulata*, var." of Lamarck (Hist. Anim. s. Vert. ii. p. 282); but there is no variety whatever mentioned in Lamarck's work.

2. *Seriatopora cervina.* B.M.

Porites cervina, Lamarck; M.-Edwards, Cor. iii. p. 314.
Seriatopora cervina, M.-Edwards, *t. c.* p. 312.

There is a specimen of *Seriatopora* in the Museum which may belong to this little-known species. In its mode of growth it is very similar to the preceding; the branches, however, are thinner, the terminal branchlets slenderer and slightly curved, and the calicles placed in less regular rows. Septa nearly obliterate. Columella moderately developed, cristiform.

This is in some respects an intermediate form between *S. lineata* and *S. hystrix*.

Hab. Indian Ocean (*Lamarck*); Australia (*J. B. Jukes* in B.M.).

3. *Seriatopora hystrix.* B.M.

Seriatopora hystrix, Dana; M.-Edwards.

Differs from the preceding in having the corallum evenly convex and rather fasciculate, the branches more crowded but less coalescing, evenly furcate, the terminal branchlets upright, stout, and strongly curved, the septa of first cycle better developed.

Hab. Feejee Islands (*Dana*); Samoa Islands (*Rev. S. J. Whitmee* in B. M.).

4. *Seriatopora pacifica.* B.M.

Corallum forming rather lax, not fasciculate clumps, very

ramose. Branches subangular, of moderate thickness, much divaricate, but scarcely coalescing, ramified at nearly right angles; branchlets more or less horizontal, straight, slender, needle-pointed. Calicles small, in rather irregular rows, those of the same row distant by nearly the length of their diameter; the interspaces on the average double as broad as the rows. Cells slightly vaulted and labiate; their edges strongly prominent, fimbriate. Septa of first cycle moderately well developed. Columella low, thick, somewhat pointed. Surface of cœnenchyma rather smooth, granulate. Diameter of principal branches about 5 millims., of branchlets at their base 2 millims., of calicles two thirds of a millim.

Hab. Feejee Islands (*F. M. Rayner* in B.M.).

This species is remarkable by being much more arborescent than its allies, a character arising from the fact that the ramification is not evenly dichotomous, but generally only one of the branchlets attains a larger size and continues to divide. From *S. hystrix* it differs in its mode of growth and in the thinner and more angular branches. In the broad and flat interspaces between the rows of calicles, and in its mode of ramification, it shows some resemblance to *S. spinosa.*

5. *Seriatopora caliendrum.* B.M.

Seriatopora caliendrum, Ehrenberg; Dana; M.-Edwards.

This species forms large clumps of subparallel and more or less perpendicular branches, these being thin and slender, but rather obtuse at their summits.

Hab. Red Sea (*Ehrenberg*), Tur near Sinai (*Häckel*); Madagascar (B.M.). A variety is recorded by Dana from the Sooloo Sea, under the denomination *S. caliendrum*, var. *gracilis*; and there is a specimen in the Museum collection marked "Navigators' Islands," which I am not able to separate as a distinct species.

There appear to exist intermediate forms between this and the preceding, and again between the latter and *S. hystrix*, which in its turn comes very near to *S. cervina.* However, the material in the Museum is not extensive enough to ascertain the nature of these transitions, especially with regard to the question how far they coincide with the geographical distribution, or whether they represent merely individual peculiarities.

6. *Seriatopora octoptera.* B.M.

Seriatopora octoptera, Ehrenberg; Dana; M.-Edwards.

A very distinct species, whose characters have been well

pointed out by Milne-Edwards. It is distinguished from all its allies by the very obtuse tops of the branches.

Hab. Red Sea (*Ehrenberg*), Tur near Sinai (*Häckel*); Singapore (*Dana*); Sooloo Sea (*Dana*).

7. *Seriatopora valida.*

Seriatopora valida, Ehrenberg, M.-Edwards.

To judge from the descriptions, this seems to be very near to *S. caliendrum*. From the following species it differs in having the branches crowded and often coalescing, the calicles small, and the surface of the cœnenchyma granulate.

8. *Seriatopora Güntheri.* B.M.

Corallum fasciculate, but rather lax on account of the scarce ramification of the principal branches, nearly spherical in general outline. Branches slender, gradually tapering, rarely coalescing at the base; angles of ramification very acute, on the average 30°–40°. Terminal branchlets long, slender, subulate, six-winged at the summit. Calicles extremely crowded, disposed in regular series, those of the same row touching each other; the interspaces between the rows narrow, distance generally much less than one half of the diameter of the calicles. Cells large, circular, placed somewhat obliquely, but only slightly vaulted; their edges not very prominent, fimbriate. Septa entirely obsolete. Columella well developed, thin, lamelliform. Surface of cœnenchyma strongly echinulate. Diameter of principal branches, on the average, 4 millims., of calicles 1 millim.

Hab. New Guinea.

This elegant species, to which I have the pleasure of attaching Dr. Günther's name, has a peculiar aspect on account of its mode of growth, as well as of its crowded, large, and open cells, the latter being rather ocelliform in their general appearance. This combination of characters serves to distinguish it readily from all the allied species.

9. *Seriatopora elegans.* B.M.

Seriatopora "subulata," M.-Edwards, Atl. Règn. Anim. Cuv., Zooph. pl. 81. fig. 2.

"Pocillopora acuta," M.-Edwards, Hist. Nat. Cor. Atlas, p. 11, pl. F 4. fig. 2.

Seriatopora elegans, M.-Edwards, *op. cit.* vol. iii. p. 312.

This is one of the best-marked species. Its principal characters are in the thick, slender, pointed, and not much ramified branches, the large and vaulted calicles, which are distinctly seriate only towards the apical parts of the branches, the very

prominent upper edges of the cells, and the nearly total obliteration of the septa.

Hab. Singapore (*M.-Edwards*) ; China (B.M.).

10. *Seriatopora stricta.* B.M.

Corallum fasciculate, in general outline hemispherical. Branches subterete, straight, subulate, moderately crowded, divaricate, coalescing at their bases ; angle of ramification, on the average, 60°. Calicles large, on the greater part of the corallum almost entirely irregularly dispersed, circular, immersed, their edges on the same level, equally and slightly prominent ; those of the terminal branches in distinct but ill-defined rows, moderately crowded, average distance about three fourths of their diameter, rather oblong, vaulted, their edge coarsely fimbriate, and in its upper part strongly labiate. Septa entirely obsolete. Columella moderately developed, linear, compressed. Surface of cœnenchyma densely and delicately spinulous, becoming more coarsely echinulate and at last granulate towards the base. Diameter of calicles 1 millim.

Hab. Cape of Good Hope.

Differs from most of its congeners in the irregular disposition of the calicles, in which respect it agrees most with *S. elegans*. From this, however, as well as from the other species, it is distinguished by numerous characters.

11. *Seriatopora spinosa.* B.M.

Millepora "lineata," Forskål ; Esper.
Seriatopora "subulata," Ehrenberg ; Dana.
Seriatopora spinosa, M.-Edwards.

This, again, is an easily recognizable and well-defined species, distinguished at the first glance by its angular and verrucose branches : this aspect is produced by the broad and flat interspaces between the rows of calicles, the latter being much crowded in each row and strongly projecting.

I am not aware that this species has been found anywhere else than in the Red Sea, where it was first discovered by Forskål, who gave a good description of it.

12. *Seriatopora ocellata.*

Seriatopora ocellata, Ehrenberg ; M.-Edwards.

Were it not for the larger calicles, I should without hesitation declare this species (which was established on a worn fragment from an unknown locality) to be identical with *S. spinosa*.